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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,522	02/14/2002	Susanne H. Goodson	SPG6594PDUS	6712
27624	7590	08/17/2009		
AKZO NOBEL INC. LEGAL & IP 120 WHITE PLAINS ROAD, SUITE 300 TARRYTOWN, NY 10591			EXAMINER SHEIKH, HUMERA N	
			ART UNIT	PAPER NUMBER
			1615	
			NOTIFICATION DATE	DELIVERY MODE
			08/17/2009	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

IPANLPATENT@AKZONOBEL.COM

### Office Action Summary

**Application No.**

10/074,522

**Applicant(s)**

GOODSON ET AL.

**Examiner**

Humera N. Sheikh

**Art Unit**

1615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 4-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s) Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s) Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

**Status of the Application**

Receipt of the Request for Continued Examination (RCE) under 37 C.F.R. 1.114, the Amendment and Applicant's Arguments/Remarks, all filed 06/02/09 is acknowledged.

Claims 1, 2 and 4-10 are pending in this action. Claim 1 has been amended. Claims 3 and 11-21 have previously been cancelled. Claims 1, 2 and 4-10 are rejected.

\* \* \* \* \*

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02 June 2009 has been entered.

\* \* \* \* \*

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation, "a solid polymer film having water solubility triggered by changes in pH comprising a polymer..." and "wherein water solubility of the polymer film is

triggered by a change in the pH, salt or surfactant concentration or both." The claim is indefinite because in the preamble of the claim, the solubility of the film is indicated to be triggered by changes in *pH* (only), whereas in the body of the claim, the solubility of the film is indicated to be triggered by changes in *pH, salt or surfactant concentration or both*. Thus in the body of the claim, solubility of the film is not limited to being triggered by changes in pH, but rather can also be by changes in *salt or surfactant concentration or both*. Hence, the claim language as now presented is confusing because it is unclear as to how film solubility is actually being triggered (*i.e.*, whether by pH, salt or surfactant concentration or both).

Clarification is requested.

\* \* \* \* \*

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1, 2 and 4-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pardini (U.S. Patent No. 4,708,870).**

**Pardini ('870)** teaches a method for imparting a non-fugitive antimicrobial activity to an article of manufacture, which comprises forming the articles of manufacture from an acrylonitrile composition which includes up to 10% of a protonated amine, or 3 mole %. The antimicrobial activity is inherent in the acrylonitrile composition (see Abstract).

Pardini teaches that non-fugitive antimicrobial activity is imparted to acrylic polymers, fibers or fabrics made thereof, by copolymerization of an acrylic protonated amine co-monomer and/or by use of protonated amine end groups (col. 2, lines 1-63).

The Examples at column 5 demonstrate various embodiments of the invention. Example 1 at Table II on column 5 demonstrates acrylonitrile (AN) and methacrylate (MA) monomers were copolymerized with various protonated amine-containing monomers. The example shows that the copolymerization of protonated amine containing monomers in acrylic polymers imparts antimicrobial activity.

With regard to mole percent claimed by Applicant, one of ordinary skill in the art would be able to make the conversion between mole percent and percent by weight. No unexpected results have been observed through Applicant's claimed mole percentage since the prior art clearly teaches suitable and similar mole percents, as shown in the Examples.

While Pardini is silent about polymer film thickness (of 1 to 5 mil), it is the position of the Examiner that the film thickness claimed does not patentably distinguish over Pardini as no unexpected result has been attributed to the film thickness claimed herein. The prior art amply teaches an article of manufacture that provides for antimicrobial activity and one that employs

the same components, *i.e.*, protonated amine, as that desired by Applicants. Moreover, the determination of a suitable or effective film thickness could be determined by one of ordinary skill in the art based on routine or manipulative experimentation to obtain optimal results as these are variable parameters.

Regarding the limitation of "a solid polymer film having water solubility triggered by changes in pH comprising a polymer...", it is the position of the Examiner that this limitation fails to impart patentability to the instant claims. Applicant states that the instant mole percent claimed (5 mole %) effects changes in solubility as a function of pH and therefore results in the desired properties of controlled release". There is no requirement in the instant claims that the water solubility of the film which can be triggered by pH, necessarily result in the property of controlled release as argued by Applicant herein. Note in particular that Applicant's specification, page 4, line 20 indicates as working embodiments that from 2 mole percent of protonated amine monomer units is within the scope of the invention. (Pardini teaches 3 mole %). Hence it cannot be seen as to how the prior art 3% would be so distinguishing from the limitations desired as to impart an unexpected result. The specification at page 4 suggests 5% as simply a preferred amount. Finally note that the % may be established by the use of a mixture of monomers. Furthermore, regarding the percentage of protonated amines, burden would be shifted to Applicant to establish that the 3 mole % of the prior art would not be effective nor capable of having the desired property, *i.e.*, controlled release.

Given the teachings of Pardini discussed above, the instant invention, when taken as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

***Response to Arguments***

Applicant's arguments filed 06/02/09 have been fully considered but were not found persuasive.

**Rejection of claims 1, 2 and 4-10 under 35 U.S.C. §103(a) over Pardini (4,708,870):**

Applicant argued, "Pardini teaches a method for imparting non-fugitive antimicrobial activity to an article of manufacturing by forming the articles of manufacture from an acrylonitrile composition that imparts antimicrobial activity to acrylic polymers. Pardini specifically limits the amount of protonated amine to no more than 10%, or 3 mole %, in order to achieve the antimicrobial activity. Therefore, the materials of Pardini with 3 mole % protonated amine do not show the desired properties of controlled release. In marked contradistinction, the materials of the present invention with 5 mole % protonated amine clearly show changes in solubility as a function of pH and therefore have the desired property of controlled release."

Applicant's arguments have been considered, but were not found persuasive. Applicant states that the "3 mole % protonated amine do not show the desired properties of controlled release". This argument was not deemed convincing because the claims are silent in terms of any reference to rates of release or release profiles and are particularly silent regarding the desired properties of controlled release argued by Applicant. There is no requirement in the instant claims that the water solubility of the film which can be triggered by pH, necessarily result in the property of controlled release as argued herein. Thus, Applicant's arguments do not establish the scope of claims being presented. Further, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features

upon which applicant relies (i.e., controlled release properties) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, it is the position of the Examiner regarding the percentage of protonated amines, that burden would be shifted to Applicant to establish that the 3 mole % of the prior art would not be effective nor capable of having the desired property, i.e., controlled release. Note in particular that Applicant's specification, page 4, line 20 indicates as working embodiments that from 2 mole percent of protonated amine monomer units is within the scope of the invention.

The 103(a) obviousness rejection has been maintained.

### ***Conclusion***

--No claims are allowed at this time.

### **Correspondence**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Humera N. Sheikh whose telephone number is (571) 272-0604. The examiner can normally be reached on Monday-Friday during regular business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached on (571) 272-8373. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Humera N. Sheikh/

Primary Examiner, Art Unit 1615

*hns*

August 11, 2009

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